

Supply of teachers

AQA submission to the Education Select Committee

November 2015

1. Executive Summary

- 1.1. AQA is an education charity and the leading provider of GCSEs and A-levels in England. We provide valued qualifications that equip students to progress to the next stage in their lives. We set and mark the papers for around half of all GCSEs and A-levels, and our qualifications are internationally recognised and taught in around 30 countries throughout the world.
- 1.2. AQA welcomes the Education Select Committee's session on the supply of teachers. Education and qualifications have been through a period of significant reform in recent years, and with some of the new GCSE and A-level specifications already being taught in schools, now is a good opportunity to see what needs to be done to prepare for first awarding in 2017. This will be the first major test of the reform programme, with the first cohort of students sitting reformed GCSEs in English Language, English Literature and Maths, alongside the first cohort of A-level students taking the reformed qualifications in the Phase 1 subjects, such as English Language, English Literature, History, Biology, Chemistry and Physics¹.
- 1.3. Teaching the reformed qualifications will be a challenge for teachers. Teachers will be preparing GCSE students for qualifications which they are unfamiliar with; GCSEs which are significantly different and more challenging. The standard for a 'good pass' will be harder, there will be additional stretch for the highest-performing students, and exams will require more extended writing in subjects such as English and History and more quantitative problem-solving in Maths and Sciences. Teachers will have to adapt their teaching styles and resources.
- 1.4. Similarly teachers and students must get to grips with the new fully linear A-levels, with assessment at the end of the course, and written exams as the default method of assessment. Whilst generally intended to be of an equivalent standard to current A-levels, some subjects will contain more demanding content, for example additional mathematical content in Sciences.

¹ Phase 1 A-level subjects reformed for first teaching in 2015: English Language, English Literature, English Language and Literature, Biology, Chemistry, Physics, History, Psychology, Art and Design, Sociology, Business, Economics and Computer Science.

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- 1.5. The next two years therefore place great pressure on teachers and students. Problems with teacher supply could place significant strain on the system, risk successful implementation of the reforms, and unfairly disadvantage students, teachers and schools.
 - 1.6. Figures published in August this year show that recruitment of teachers in English and maths is down 12% and 11% respectively, with much higher figures in other subjects². Yet government figures indicate that in maths 4,189 additional new teachers will be needed in 2015/16, 4,347 in 2016/17, and 4,502 in 2017/18. In the sciences, between 1,100 and 1,900 new teachers are needed in each of Biology, Chemistry and Physics over the next five years³.
 - 1.7. While we acknowledge that there are issues with teacher recruitment and retention across almost all subjects, our concerns are more specifically focused on maths and science teachers. These are the main subjects where it appears systemic drivers are increasing the need for teachers.
 - 1.8. We have a serious concern about the capacity and sheer number of teachers available to meet the increased demand, especially in maths. The new Maths GCSE is significantly larger than the previous GCSE and will require more teaching time. Additionally, policies intended to increase the take-up of post-16 maths will further increase the demand for teachers. Students are at risk of not receiving sufficient support in the event of a teacher shortage, impacting on their educational experience, and ultimately potentially impacting on their performance. We are concerned about the pressure this could put on students and teachers.
 - 1.9. In science, feedback from customers suggests higher volumes of the most experienced science teachers and heads may leave within the next few years. This could lead to significant loss of experience and some schools, potentially those in more disadvantaged areas, may suffer disproportionately from recruitment problems.

² Department for Education, 2014. *Initial teacher training census for the academic year 2014 to 2015* [pdf] Available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/380175/ITT_CENSUS_2014-15_FINAL.pdf cited in Boffey, D and Helm, T, 2015. Shortage of teachers set to spark new schools crisis. *The Guardian* [online] Available at <http://www.theguardian.com/education/2015/aug/29/shortage-teachers-new-schools-crisis-uk-trainee-shortfall>

³ Department for Education, 2015. *Teacher supply model: user guide 2016 to 2017* [pdf] Available at <https://www.gov.uk/government/publications/teacher-supply-model>

2. Current challenges relating to recruitment and retention of teachers

- 2.1 There are various factors arising from qualification reform which have caused an increase in the need for teachers across numerous subjects. We believe the issues in teacher recruitment to be a national problem across England and Wales.
- 2.2 In maths, there are three factors which have combined to exacerbate the current problem in teacher recruitment. These are discussed in more detail below, but in summary they are:
- the reformed Maths GCSE, which has more content and more demanding content than the previous GCSE
 - the new Core Maths qualification
 - the increase in the popularity of maths as a subject in recent years.
- 2.3 The reformed Maths GCSE, which schools are now teaching for first awarding in 2017, is more demanding and has more content. Schools have reported that this has led them to spend additional time on maths lessons each week, and in need of more maths teachers in school to cover the extra lesson time.⁴
- 2.4 New 'Core Maths' qualifications, intended for those students who achieve a grade C or higher at GCSE but who do not wish to study AS or A-level Maths, have also added to the number of maths teaching hours schools need to plan to provide. Anecdotally we can report from our customers and contacts that weekly totals of increased teaching time of the reformed GCSE maths are approximately 3-5 hours more than the old specifications.
- 2.5 There has been an increased focus on the 'core academic subjects' which make up the EBacc at GCSE (English, maths, sciences, history/geography and languages), and on compulsory post-16 study of maths and English for those without a C at GCSE. In addition, maths has increased in popularity over the last five years (the number of students taking maths A-level has risen by 15.3% since 2010)⁵.
- 2.6 AQA has welcomed the increased profile of maths, and the Government's focus on raising its popularity and importance as a qualification at GCSE and A-level. However, there is a direct

⁴ Morrison, N, 2015. Secondaries to increase maths teaching time *TES* [online] 24 October. Available at <https://www.tes.com/news/school-news/breaking-news/secondaries-increase-maths-teaching-time>

⁵ Ibid

correlation between the increases in popularity and in demand and content, and the need for more maths teachers in schools.

2.7 In science, there are four main pressures combining to exacerbate the current problems with teacher recruitment. These are discussed in more detail below, but in summary they are:

- increase in the level of demand
- emphasis on science through Attainment 8 and Progress 8
- age distribution of heads of department and recruitment of new heads
- increased pressure on younger/newly-qualified science teachers.

2.8 We have seen a similar increase in the level of demand in the reformed qualifications in science as previously mentioned in maths. There is an increase in the mathematical content within science GCSEs and A-levels, along with more practical work. The increased size and demand of the qualifications means that more schools are now teaching the GCSE course over three years instead of two, to allow them time to fully prepare students for the exams. This leads to pressures on teacher timetables and, without recruiting extra staff, could mean a reduction in the amount of contact time each student has with their teacher.

2.9 There is also a greater emphasis placed on science through Attainment 8 and Progress 8. From 2016, students' progress will be measured across eight subjects, sorted into three 'baskets':

- Basket 1: English and maths (this basket is the only one to be double weighted)
- Basket 2: three EBacc subjects (sciences, computer science, geography, history and languages)
- Basket 3: three further subjects, which can be EBacc subjects, or other approved arts, academic or vocational qualifications.

A student's grades for each of the subjects in their baskets is added up and averaged to give their Attainment 8 score. The Progress 8 score for the student is then calculated by comparing the student's Attainment 8 scores to their estimated Attainment 8 scores, based on prior attainment at KS2. A school's Progress 8 score is an average of all of its students' Progress 8 scores.

As a consequence, if a school implements a curriculum where students do not take approved qualifications in the central three EBacc subject slots, they risk being scored zero in that basket, lowering the student's Attainment 8 score. Schools which currently offer vocational

science qualifications which are not eligible could see their Progress 8 scores impacted if they do not change to offering GCSE sciences instead. This is driving a switch to traditional qualifications and increases the pressure on schools to recruit more qualified science teachers in order to meet demand.

2.10 We are also concerned that the age distribution of heads of science is skewed towards the over 50 age group. From conversations with customers we are anticipating high volumes of the most experienced science teachers and heads leaving within the next few years, leaving the more recently qualified teachers with less management experience to be promoted into the more senior roles. This is even more apparent in urban mainstream schools, and runs the risk of leaving more disadvantaged students without sufficient support in the form of experienced staff in the lead up to their 2017 exams.

2.11 We have also heard from some schools facing a recruitment struggle and potential budget worries that they might have to reduce the amount of contact time. This is a concern for the schools, and for us, as it could significantly impact on students (particularly those preparing to sit the reformed exams in summer 2017).

3. Conclusion

3.1. AQA believes that there are significant challenges relating to recruitment and retention of teachers.

3.2. Although other organisations will be better placed to make recommendations regarding teacher recruitment policy, we are able to provide insight as to how these teacher shortages may impact the reform programme.

3.3. We wish to acknowledge within this submission the pressure faced by schools in trying to recruit sufficient numbers of teachers, and the potential for students to be disadvantaged.